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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,461	12/29/2004	Fuijita Jin	MOR-C508	2671

7590 02/22/2006

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EXAMINER
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STEIN, JAMES D

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/519,461		JIN ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	James D. Stein		2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 5-7, 9-16 and 18-20 is/are allowed.
- 6) ☒ Claim(s) 4, 8, 17 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>0205</u> .  | 6) <input type="checkbox"/> Other: ____                                     |

### **DETAILED ACTION**

The preliminary amendment filed on 12/29/04 has been fully considered and entered.

#### ***Information Disclosure Statement***

The documents cited in the IDS filed 02/07/05 have been considered (note attached copy of PTO-1449 form).

#### ***Drawings***

Six (6) pages of drawings filed 12/29/04 have been accepted by the examiner.

#### ***Specification***

Applicants cooperation is requested in correcting any errors in the specification of which applicant maybe become aware.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 8, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over [USPAT 6,301,421] to Wickham et al. ("Wickham"), which discloses a related optical fiber component.

With regard to claims 4 and 8, fig. 3 of Wickham shows a single-mode fiber 50; and a photonic crystal fiber 110 having an endface optically connected to an end face of said fiber 50 and having a mode field diameter larger than that of said fiber 50 (clearly shown in fig. 3, col. 3 line 47 – col. 4 line 20). Therefore, the claimed invention has been disclosed and previously

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discussed above except for a ferrule having a diameter equal to the diameter of the photonic crystal fiber 110, thereby forming a connector. Optical fiber ferrules are well-known in the art to provide support and structure to fibers in coupling arrangements. It would have been obvious at the time of the invention to one of ordinary skill in the art to include such in order to provide support to the single mode fiber 50 in its connection to photonic crystal fiber 110.

With regard to claim 8, in addition to the rejection of claim 4 previously discussed above, the claimed invention has been disclosed and previously discussed above except for a connector housing attached to the end portion of the PC fiber 110. Connector housings are well known and commonly used in the art to provide protection to optical connections. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in art to include a connector housing attached to the end of the PC fiber 110 in order to provide protection to the optical connection.

With regard to claims 17 and 21, in addition to the rejection of claim 4 previously discussed above, Wickham teaches that the purpose of the device is to produce a single-mode laser amplification system with a large mode field diameter (abstract, col. 4 line 18). Large mode field diameters are generally understood in the art to be greater than 20 micrometers as claimed.

***Allowable Subject Matter***

Claims 1-3, 5-7, 9-16 and 18-20 are allowed. None of the cited prior art discloses or suggests the optical fiber component discussed above, further comprising a pair of PC fibers coupled to an optical element, and a pair of single mode fibers coupled to the PC fibers; the optical fiber component further comprising a collimation lens having an end face optically

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connected to an endface of the single mode fiber and the PC fiber having an endface optically coupled to another end face of the collimation lens. Applicant has discovered these features allow improved control of the mode field diameter with less optical loss than the prior art. This arrangement also permits the mode field diameter of an optical signal to be enlarged prior to entering and being processed by the optical element. It would not have been obvious at the time of the invention to one of ordinary skill in the art to modify the prior art to include these features because there is no motivation or suggestion in the prior art that such an arrangement would be advantageous in any way.

### *Conclusion*

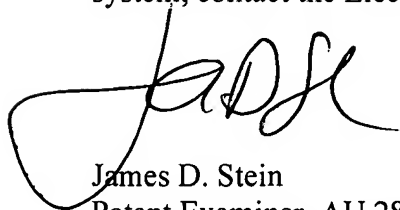
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein  
Patent Examiner, AU 2874



**MICHELLE CONNELLY-CUSHWA**  
**PRIMARY EXAMINER**  
2/16/09